

CLAIMS

What is claimed is:

1 1. A method comprising:
2 providing at least one performance object containing a plurality of events;
3 allowing a user to select a set of events to be monitored during a collection
4 session from said at least one performance object;
5 programming performance counters associated with said set of events selected to
6 increment in response to an occurrence of a respective event; and
7 periodically reading data stored in each of said performance counters associated
8 with said selected set of events during the collection session.

1 2. The method of claim 1, wherein at least one of said performance counters is
2 embodied in the form of at least one hardware register.

1 3. The method of claim 1, wherein at least one of said performance counters is
2 embodied in the form of a software variable.

1 4. The method of claim 1, wherein said set of events selected by the user includes
2 at least one of said plurality of events contained in said at least one performance object.

1 5. The method of claim 1, wherein said set of events selected by the user includes
2 all of said plurality of events contained in said at least one performance object.

1 6. The method of claim 1, wherein at least one of the events in the performance
2 object has at least one customization option associated therewith; and said method further
3 comprising allowing the user to customize performance data collection of said at least
4 one of the events by selecting said at least one customization option associated therewith.

1 7. The method of claim 6, further comprising generating a new name for a
2 selected event if collection thereof has been customized.

1 8. The method of claim 1, wherein said set of events selected by the user includes
2 at least one event associated with a hardware component and at least one event associated
3 with a user application.

1 9. The method of claim 8, wherein said set of events selected by the user further
2 includes at least one event associated with an operating system function.

1 10. A machine readable medium that provides instructions, which when executed
2 by a machine, cause said machine to perform operations comprising:
3 configuring a collection session by allowing a user to selectively choose a subset
4 of events to be monitored during a collection session from a performance object
5 containing a list of events;
6 programming performance counters associated with the subset of events selected
7 by the user to count the occurrence of a respective event prior to the collection session;
8 and
9 reading data stored in the performance counters during the collection session.

1 11. The medium of claim 10, wherein at least one of said performance counters is
2 embodied in the form of at least one hardware register.

1 12. The medium of claim 10, wherein at least one of said performance counters is
2 embodied in the form of a software variable.

1 13. The medium of claim 10, wherein the operations further comprise displaying
2 names and descriptions of each event associated with the performance object.

1 14. The medium of claim 10, wherein the configuring of the collection session
2 further comprises allowing the user to configure when the respective performance counter
3 is incremented.

1 15. The medium of claim 10, wherein the programming of the performance
2 counters is accomplished by a performance dynamic link library (performance DLL)
3 which sends commands to a respective performance counter residing in a hardware
4 component via a respective device driver to count the occurrence of a respective event.

1 16. The medium of claim 10, wherein a plurality of performance objects are
2 supported by a performance dynamic link library (performance DLL).

1 17. The medium of claim 10, wherein said subset of events selected by the user
2 includes at least one event associated with a hardware component and at least one event
3 associated with a user application.

1 18. The medium of claim 17, wherein said subset of events selected by the user
2 further includes at least one event associated with an operating system.

1 19. A system comprising:

2 a plurality of performance counters, each of said performance counters associated
3 with a respective subsystem component of a computer system, each of said performance
4 counter coupled to receive a plurality of event signals generated within the respective
5 subsystem component, each of said performance counters including a register and a
6 controller to selectively couple one of the event signals to the register to increment the
7 register; and

8 an application in communication with at least one of said performance counters,
9 said application to program the controller of said at least one of said performance
10 counters to enable one of the event signals coupled thereto to increment the register
11 thereof in response to an occurrence of a selected event, said application to periodically
12 read data stored in the register of said at least one of said performance counters while the
13 computer system is executing instructions.

1 20. The system of claim 19, further comprising at least one performance dynamic
2 link library (performance DLL) which is loaded when the application is executed, said
3 performance DLL serving as a bridge between the application and performance counters
4 that reside in the computer system.

1 21. The system of claim 20, wherein the application is capable of executing a
2 number of performance DLLs to allow monitoring of a plurality of subsystem
3 components simultaneously within the computer system.

1 22. The system of claim 21, wherein said plurality of subsystem components
2 simultaneously monitored include at least one hardware component, at least one user
3 application and at least one operating system function.

1 23. The system of claim 21, wherein the performance DLL is derived from a set
2 of performance application programming interfaces (Performance APIs).

1 24. The system of claim 23, wherein the set of performance APIs includes an
2 interface which serves to program the performance counter prior to the collection session
3 to enable one of the event signals coupled to the performance counter to increment the
4 register in response to an occurrence of the selected event.

1 25. The system of claim 23, wherein the set of performance APIs includes an
2 interface which serves to generate a new name for a particular event if collection thereof
3 has been customized.